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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,509	02/20/2004	Bryan D. Cull	FBSI-26,582	7587

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EXAMINER

HYEON, HAE M

ART UNIT PAPER NUMBER

2839

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,509

Applicant(s)

CULL, BRYAN D.

Examiner

Hae M Hyeon

Art Unit

2839

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 10-12, 14-16 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 4, 9, 13 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 2-17, 19 and 20 are objected to because of the following informalities:
 - “A” recited in claim 10, line 1 should be -- An --.
 - “A” recited in the line 1 of the dependent claims should be -- The --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
3. Claims 1 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the housing, the support member and the retainer ring. Claims 1 and 10 simply recite that the retainer ring is engaged with the shank of the support member, but claims 1 and 10 do not explain the retainer ring's structure, function, location related to the other element, or how the retainer ring is engaged with the shank.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 5, 6, 8 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Borsuk (4,496,213).

Borsuk discloses a fiber optic connector 10 comprising a housing 22 having a forward portion 12 and a rear portion 14, a cable 16 having a plurality of optical fiber 20, a support member 56 having a shank 62, a retainer ring 58, and a rear facing recess 24 at the forward portion 12. The retainer ring 58 is engaged with the shank 62. The recess 24 has a recess profile, which receives termini 30 of the optical fibers 20. The shank 62 is disposed within the housing 22 extending between the rear portion 14 and the forward portion 12 of the housing 22 with a gap disposed between the housing 22 and the shank 62 through which the optical fibers 20 extend and wrap around the shank 62 with a bend radius which is not less than the predetermined minimum bend radius for the optical fibers 20. Figure 1 clearly shows the retainer ring 58 includes profiles having inward portions for receiving the termini of the optical fibers 20.

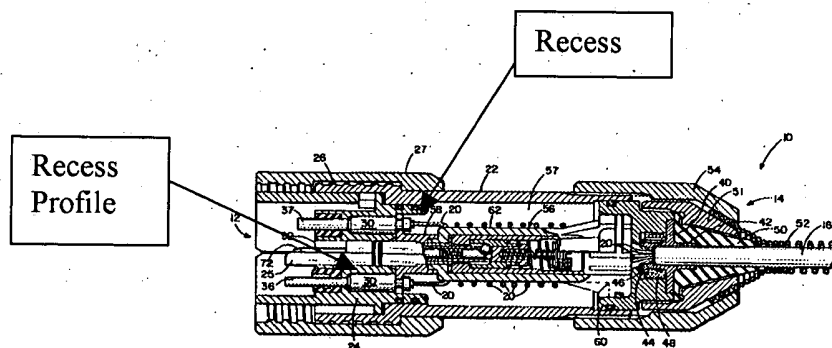


FIG. 1

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 7, 10-12, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borsuk.

Claim 10 recites the connector having the same structure as the connector of claim 1 except, claim 10 recites that the connector is an electrical connector. However, the connector 10 of Borsuk is an optical connector. The official notice is taken that a connector having an electrical conductor or an optical conductor is well known in the art. Depending on a signal, optical or electrical signal, a connector can be an optical connector if it includes an optical fiber, and a connector can be an electrical connector if it includes an electrical wire. Furthermore, if a connector includes both an optical fiber and an electrical wire, the connector becomes a hybrid electro-optic connector.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the connector taught by Borsuk such that it would have either optical fiber, electrical wire or combination of both as taught by the instant invention because a connector could have either optical fiber, electrical wire or combination of both depending on the desired signal.

Allowable Subject Matter

8. Claims 4, 9, 13, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

None of the cited prior art shows the retainer profile of the claimed invention being fit within the recess profile of the claimed invention in a keyed arrangement, thereby angularly aligning the retainer ring with the recess.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 5,980,317 by McNeel and US Patent No. 6,305,849 B1 by Roehrs et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose AU is 2839 and whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the telephone number 571-272-2800 ext 39.

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Any response to this action may be mailed to:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

For additional information regarding this new address, which was effective May 1, 2003, *see Correspondence with the United States Patent and Trademark Office*, 68 Fed. Reg. 14332 (March 25, 2003).

Hae M Hyeon

Examiner

Art Unit 2839

hnh

hnh

Hae Moon Hyeon